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3-25-2014

# The Economic and Tax Revenue Impact of Coal Industry Activity in Nebraska: Final Report

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A Bureau of Business Research Report  
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## **Final Report**

### **The Economic and Tax Revenue Impact of Coal Industry Activity in Nebraska**

Prepared for the Nebraska Public Power District  
Prepared by Dr. Eric Thompson, Director

March 25, 2014  
Bureau of Business Research  
Department of Economics  
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## EXECUTIVE SUMMARY

Nebraska businesses and households are actively involved in the coal industry as energy producers and as transportation providers. Nebraska has seven coal-fired electric generation stations. There are 839 workers employed at these stations, or in positions at other locations which are directly tied to coal-fired electricity generation, with annual wages and benefits of approximately \$87 million. The stations benefit the Nebraska economy by providing reliable, low cost energy utilized by Nebraska industries, agricultural producers, commercial businesses and households. In addition, many of these stations generate power that is “exported,” meaning that it is purchased by out of state customers. Such export activity creates an economic impact on the state economy. Collectively, the 7 stations export approximately 9.6 percent of their output. These exports generate a direct economic impact of \$55 million in output, \$34 million in value added, \$8 million in labor income and create 81 jobs in Nebraska. Multiplying this effect through the Nebraska economy generates a total economic impact of \$77 million in output, \$16 million in labor income and 246 jobs. This economic activity generates \$4.1 million in income, sales and property taxes. These figures are reported in the first section of the table below.

### ECONOMIC IMPACTS OF COAL ON THE NEBRASKA ECONOMY

<b>Coal-Fired Electricity Production</b>			
	<b>Direct Impact</b>	<b>Multiplied Impact</b>	<b>Total Impact</b>
Output (Millions)	\$55	\$22	\$77
Value Added (Millions)	\$34	\$12	\$46
Labor Income (Millions)	\$8	\$7	\$16
Jobs	81	166	246
Income, Sales & Property Taxes (Millions)			\$4.1
<b>Coal Transportation</b>			
	<b>Direct Impact</b>	<b>Multiplied Impact</b>	<b>Total Impact</b>
Output (Millions)	\$2,935	\$1,855	\$4,790
Value Added (Millions)	\$1,265	\$991	\$2,256
Labor Income (Millions)	\$745	\$684	\$1,429
Jobs	6,750	15,848	22,598
Income, Sales & Property Taxes (Millions)			\$137
<b>Transportation Plus Generation</b>			
	<b>Direct Impact</b>	<b>Multiplied Impact</b>	<b>Total Impact</b>
Output (Millions)	\$2,990	\$1,877	\$4,867
Value Added (Millions)	\$1,298	\$1,003	\$2,302
Labor Income (Millions)	\$754	\$691	\$1,445
Jobs	6,831	16,013	22,844
Income, Sales & Property Taxes (Millions)			\$142

Much of the nation’s coal heading eastward passes through Nebraska. In addition, Nebraska is the home of the headquarters of Union Pacific railroad and hosts three sizable switching yards for that company as well as BNSF. Activity in all of these sectors creates economic impact in

Nebraska. Coal-related rail activity directly generates \$2.9 billion in output, \$1.3 billion in value added, \$745 million in labor income and creates 6,750 jobs in Nebraska, as seen in the second section of the table. Multiplying this effect through the Nebraska economy generates \$4.8 billion in output, \$1.4 billion in labor income and 22,600 jobs. This economic activity generates \$137 million in income, sales and property taxes.

Collectively, these two coal-related industries generate almost \$4.9 billion in output, over \$1.4 billion in labor income and more than 22,800 jobs. This economic activity generates \$142 million in income, sales and property taxes.

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## **I. Introduction**

Nebraska businesses and households are actively involved in the national and global coal industry as transportation providers and as energy producers and consumers. These roles imply that the coal industry has a substantial influence on the economy of Nebraska, even though the state is not home to coal mining activity. This is particularly true in the case of coal hauling. Nebraska is a major transit point for hauling coal mined in western states such as Wyoming towards the Midwest and eastern United States. As such, Nebraska rail crews are busy operating coal trains and maintaining tracks, thereby supporting Nebraska employment. Nebraska also is home to several major rail yards that monitor, switch and maintain coal trains travelling throughout the United States. Finally, revenue from coal-hauling across the United States supports headquarters employment at Union Pacific railroad, which is headquartered in Omaha, Nebraska.

Energy production in coal-fired power stations also has a significant influence on the Nebraska economy. These facilities are important sources of high wage employment. Nebraska is home to seven coal-burning power stations, including some which sell wholesale power to out-of-state utilities. In an economic sense, these out-of-state sales imply that coal-fired power stations are exporting some of their energy production.

This report by the University of Nebraska-Lincoln Bureau of Business Research (UNL-BBR) examines the economic impact in Nebraska from these coal transportation and energy production activities during calendar year 2013. We begin by estimating the direct economic impact on the Nebraska economy from coal hauling and that portion of power production purchased by ratepayers in other states. We also estimate the total employment in Nebraska coal-fired electricity generating stations. The report also considers the multiplier impact which occurs as money earned from coal hauling and power production circulates further within the Nebraska economy. The report focuses on the statewide economic impact during the year 2013; however, a local economic impact is estimated for two specific example facilities: the Bailey Yard in North Platte, Nebraska and the nearby Gerald Gentleman Station.

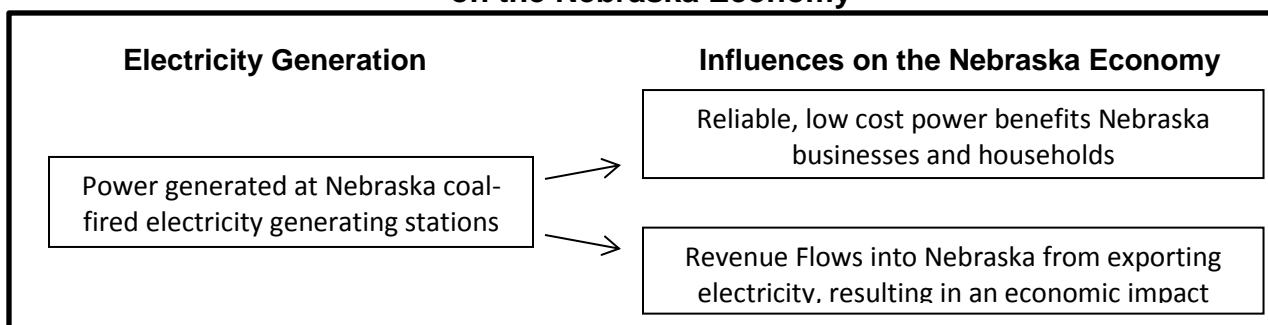
The next section of the report describes the economic impact methodology. The statewide economic impact is estimated in Section III for both coal transportation and for electricity production in coal-burning power stations. Fiscal impacts also are estimated in Section III. Section IV contains a description and estimate of the economic and fiscal impact of Union Pacific's Bailey Yard and Nebraska Public Power District's (NPPD's) Gerald Gentleman Station on the North Platte Micropolitan Area. Section V is a conclusion.

## II. Methodology

The economic impact of the coal industry on Nebraska is derived from two sources: energy production at coal-fired stations and coal transportation. Each source is considered below.

Coal-fired generation is the primary means of electricity generation in the state of Nebraska. Figure 1 shows the two ways in which coal-fired electricity generation influences the Nebraska economy. First, the Nebraska economy benefits from coal-fired electricity generation purchased by in-state customers, since reliable, low cost electric power is critical for Nebraska manufacturers, agricultural producers, commercial businesses and households. Second, there is an impact on the Nebraska economy when electricity is “exported,” that is, when it is purchased by out of state customers. The current study focuses on the second category, the economic impact derived from exporting electricity produced at coal-fired generation stations.

**Figure 1 Influence of Coal-Fired Electricity Generation on the Nebraska Economy**



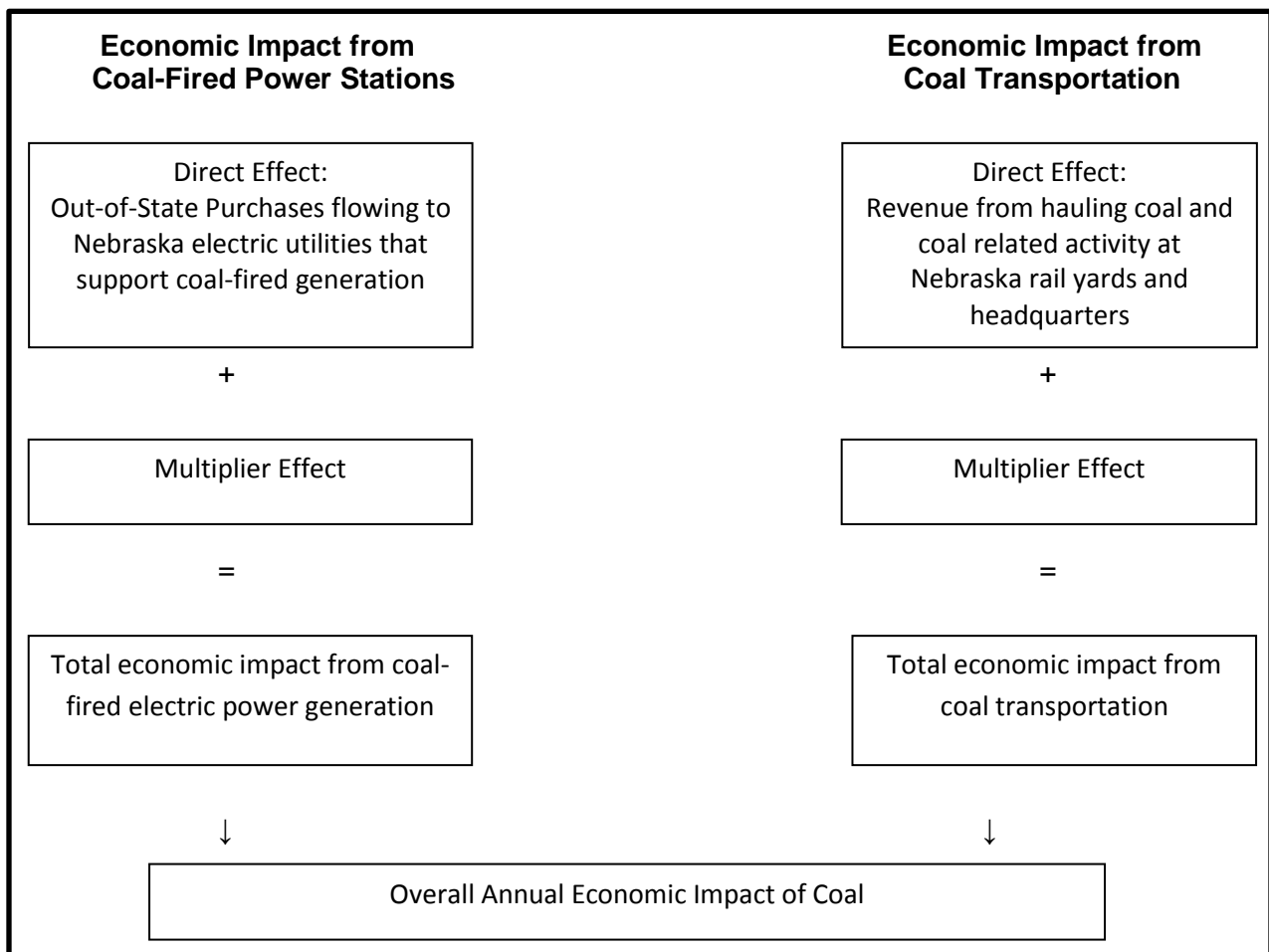
The study also considers the economic impact on Nebraska from coal transportation. The movement of coal is a major activity of the U.S. rail industry and has an important impact on the Nebraska economy, given that the state is a national center for the U.S. rail industry. The State of Nebraska has thousands of miles of heavily used track. These tracks are used when coal is moved from mines in Wyoming and other western states towards the Midwest and east regions of the United States. Further, the headquarters of Union Pacific is located in Omaha, Nebraska. Union Pacific and another major railroad, BNSF, have major rail yards in the state.

Figure 2 shows the approach for calculating the annual economic impact of coal on the Nebraska economy. That impact starts with the direct economic activity in Nebraska related to coal transportation or coal-fired electric power generation. Figure 2 also shows a multiplier impact. The multiplier impact captures the additional economic activity that occurs within the state economy as new money attracted to Nebraska by power generation and coal transportation circulates further within the state economy. The multiplier impact occurs in part as



coal-fired electricity generating stations or railroads purchase services from in-state firms such as accounting services, legal services or supplies. The multiplier impact also occurs as utility or railroad employees spend their paychecks throughout the local economy on typical household expenditures such as food, health care, housing, insurance, apparel, and entertainment. The multiplier impact is calculated using economic multipliers which show the dollars of additional economic activity per dollar of direct economic impact. Appropriate economic multipliers for the electric utility and rail transportation industries will be calculated utilizing the IMPLAN model, the leading software package for calculating economic multipliers.<sup>1</sup>

**Figure 2 Approach for Calculating the Annual Impact of Coal on the Nebraska Economy**



<sup>1</sup> The IMPLAN model, which was developed by the Minnesota IMPLAN Group (MIG, Inc.), is the leading economic multiplier package in use in the United States, and can be used to calculate economic multipliers for around 400 industries for each U.S. state, county, or combination of state and counties. We also note that the IMPLAN model has been recently updated, and the UNL-BBR has utilized the IMPLAN model to conduct several dozen economic impact studies.

The total economic impact is the sum of the direct economic impact and the multiplier impact. As seen in Figure 2, a total economic impact estimate will be generated for both coal-fired electricity generation and coal transportation. The overall annual economic impact is the sum of the total economic impact from each of these two components.

These economic impacts also lead to fiscal impacts. This is because a portion of the overall economic impact (in terms of business sales) is reflected in the labor market through labor income. Labor income is directly subject to state income tax. Labor income also leads to taxable sales and supports property purchases, implying state and local sales tax revenue and local property tax revenue. These fiscal impacts are estimated by applying relevant Nebraska income, sales and property tax rates.

### **III. The Economic and Fiscal Impact of Coal in Nebraska**

The economic and fiscal impact of coal is estimated in this section. The impact from coal-fired electricity generation is estimated first. Then the impact from coal transportation is estimated. For each sector, the direct impact is estimated first using information from industry sources as well as secondary data. The multiplier impact is estimated using economic multipliers from the IMPLAN model. The direct and multiplier impact is summed to estimate the total economic impact. Direct property tax payments, or payments in lieu of taxes, by electric utilities and railroads contribute to the fiscal impact. In that analysis, values for the labor income impact are used to estimate additional property and sales tax impacts resulting from the economic impact of coal.

### ***A. The Economic Impact of Coal-Fired Electric Power Generation in Nebraska***

Table 1 below shows relevant information for coal-fired electricity generating stations in Nebraska. The seven facilities and their capacities (in megawatts) were identified from the Nebraska Power Association.<sup>2</sup> Employment data were obtained directly from the utilities. The last column in the table shows the employment to capacity ratio for each station.

Table 1 Coal-Fired Generation Stations

<b>Coal Stations</b>	<b>Capacity</b>	<b>Employment/MW</b>	
	<b>(MW)</b>	<b>Employment</b>	<b>Cap</b>
Gerald Gentleman	1,365	219	0.160
Fremont	130	50	0.385
Nebraska City	1,330	156	0.123
North Omaha	646	112	0.163
Platte	100	66	0.660
Sheldon	225	85	0.378
Whelan Energy Center	297	77	0.259
<b>Total</b>	<b>4,093</b>	<b>767</b>	<b>0.187</b>

Sources: Various NE Electric Utilities, Power Magazine and U.S. Energy Information Administration

Data from utilities indicate employment of 767 in coal-fired electric utility stations in Nebraska in 2013. There also were 72 NPPD jobs present in other locations in Nebraska that supported activity at the utility's two coal-fired power stations. These jobs are dependent on coal production and should be added to the total. Similar information was not provided for the other utilities. Including these jobs yields an estimate that there are at least 839 total Nebraska jobs in the Nebraska electric utility industry directly related to coal-fired electricity production. That figure would be larger if other utilities would have reported off-location support jobs. Utilities reported employee compensation, including both wages and benefits, of \$87.0 million during 2013. Information was not available for output and value-added regarding coal-fired electric utility generation. These values, however, can be estimated utilizing information available in the IMPLAN model, which contains utility industry average ratios for value-added per dollar of employee compensation and output per dollar of value-added.

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<sup>2</sup> [www.nepower.org/our-business/resource-mix/fossil-fuels/coal/](http://www.nepower.org/our-business/resource-mix/fossil-fuels/coal/)

Values in Table 2 reflect totals for Nebraska coal-fired electric power stations. These totals include power generation supported by spending by Nebraska customers as well as power generation supported by purchases by out-of-state utilities. IMPLAN estimates indicate that these seven stations produced \$569.7 million in output and \$351.9 million in value added.

Table 2 Estimated Economic Characteristics of  
Nebraska Coal-Fired Generating Stations 2013

<b>Characteristic</b>	<b>Nebraska Total</b>
Output (Millions of \$)	\$569.7
Value-Added (Millions of \$)	\$351.9
Labor Income (Millions of \$)	\$87.0
Employment	839

Source: All but employment and labor income  
estimated using IMPLAN

Power generation supported by out-of-state purchasers has a clear economic impact on the Nebraska economy. Information gathered from the annual reports of both NPPD and OPPD suggest that approximately 12.5% of these companies' power generation in Nebraska is supported by out-of-state customers. We assume that this same percentage applies to that portion of total NPPD and OPPD electric power generation that is from coal-fired power stations; since it is not feasible to separate the portion of out-of-state sales due to different types of power generation. At the same time, power generation at the Fremont, Platte and Whelan Energy Center stations is supported by in-state customers. After adjusting for the share of electric power generation over all seven stations, we estimate that 9.6% of generation is supported by payments by out-of-state customers. This percentage is used to adjust the total in Table 2 to isolate the portion of sales which contributes a direct economic impact on the State of Nebraska.

Table 3 shows the direct, multiplier and total economic impact for all four measures: output, value-added, labor income and employment. Multiplier impacts were estimated using IMPLAN and the direct impact was added to the multiplier impact to yield the 2013 total economic impact. Again, these are the impacts just from generation is supported by payments by out-of-state customers. However, electricity sold to retail and wholesale customers within the State of Nebraska also have notable consequences for the Nebraska economy. To begin with, recall that 90% of the 839 jobs in Table 2 are supported by payments for in-state retail and

wholesale customers. Coal also has an important influence on the Nebraska economy because of the prices which Nebraska customers pay for electricity. Coal provides the fuel for approximately half of electricity production in Nebraska. It therefore has a major role in a utility industry which charges some of the lowest rates in the country. This edge in energy costs creates an important comparative advantage in locating manufacturing plants and other energy-intensive industries in the state.

Table 3 Statewide Economic Impact from  
Nebraska Coal-Fired Generating Stations 2013

Characteristic	Direct Impact	Multiplier Impact	Total Impact
Output (Millions of \$)	\$54.8	\$21.7	\$76.5
Value-Added (Millions of \$)	\$33.9	\$11.7	\$45.6
Labor Income (Millions of \$)	\$8.4	\$7.4	\$15.8
Employment	81	166	246

Source: Author's calculations using IMPLAN

The total economic impact in terms of output, the measure of business sales, from coal-fired electricity generation was \$76.5 million in 2013. A portion of this output covers the purchase of inputs to electricity production such as coal but the majority goes to cover payments to factors of production such as capital, profits and labor income. Capital, profits and labor income are all components of value-added. The total economic impact in terms of value-added was \$45.6 million for 2013. Labor income is an important component of value-added, and accounts for just over one-third of value-added in 2013. The total economic impact in terms of labor income was \$15.8 million including wages, salaries and benefits. This labor income supported 246 high paying jobs within the electric power generation and supplier industries.

Economic impact estimates also can be used to estimate a fiscal impact, in particular, the impact on state and local tax revenues in Nebraska. The focus is on revenue from the major categories of income, sales and property taxes. As seen in Table 4, the labor income impact is the key factor in estimating revenue impacts. Labor income is directly subject to state income tax. The effective state income tax rate, the ratio of income tax revenue to income, is 2.7%. At this effective tax rate, the \$74.7 million labor income impact yields to a \$2.0 million income tax impact in 2013.

Table 4 Fiscal Impact from Nebraska Coal-Fired Generating Stations 2013

Characteristic	Labor Income	Taxable Amount	Tax Rate	Revenue Impact
Income Tax Millions of \$)	\$15.8	\$15.8	2.7%	\$0.4
Sales Tax (Millions of \$)	\$15.8	\$5.7	7.0%	\$0.4
Property Tax (Millions of \$)	\$15.8	\$27.1	2.0%	\$0.5
Direct Property Tax (Million \$)				\$2.8
Total (Millions of \$)				\$4.1

Source: Author's calculations using IMPLAN

Table 4 also shows the state and local sales tax impact. The ratio of taxable sales to income in Nebraska is approximately 36%. This ratio implies taxable sales of \$5.7 million in 2013, as seen in Table 4. A 7% state and local sales tax rate is applied to this figure, since most larger retail centers in Nebraska charge a local option sales tax of 1.5% and the state sales tax rate is 5.5%. The sales tax impact in 2013 is \$0.4 million. Income also supports property purchases in Nebraska, primarily through monthly mortgage or rent payments. The ratio of taxable commercial and residential property to income in Nebraska is 1.72. This ratio is applied to the income impact to estimate the resulting increase in taxable property in the state of Nebraska. The taxable property estimate is \$27.1 million. An average property tax rate of 2.0% is applied to this amount to yield an estimate that the property tax impact is \$0.5 million in 2013. There are also direct property tax payments and payments in lieu of taxes, which were reported directly by the utilities that own coal-fired power stations. We also report 9.6% of these property tax payments in Table 4. The total fiscal impact from coal-fired electric generation in Nebraska in 2013 is \$4.1 million.

### ***B. The Economic Impact from Coal Transportation***

Appendix 2 shows data on coal hauling by rail within and across Nebraska. The data were obtained from the Energy Information Administration's (EIA) Web site. That site shows coal shipments by state of origin and state of destination. BNSF and UP route maps were reviewed to select those origin/destination pairs most likely to either terminate in or traverse Nebraska. Short tons of coal shipped were obtained for each quarter in 2012, the latest year with available data. For the year, there were 269 million short tons shipped across the state.

The EIA also publishes data on rail costs per ton of coal shipped for state origin/destination pairs. The latest data are in 2010 dollars. For each state origin/destination pair, the volume of tons-shipped in year 2012 was multiplied by rail costs per ton to determine the value of shipments that crossed through the state of Nebraska. When this total is summed across each of the origin/destination pairs, the value is \$4.6 billion in 2010 dollars. The next step is to determine the value of the rail shipping activity that took place in Nebraska. Route maps from BNSF and UP were used to estimate the distance of each origin/pair shipment and the percentage of that distance that was in Nebraska. This percentage was multiplied by the value of the shipment to determine the value of shipments that took place as the trains were crossing Nebraska. Results for each state origin/destination pair were summed to yield a total value of almost \$2.3 billion in 2010 dollars. That value is also expected to hold for the year 2013, since the change in costs per ton is between 2010 and 2013 is unknown.

Using the IMPLAN model, the previously described estimates of revenue from shipping coal can be used to derive an estimate of the other measures of economic activity from coal shipping such as value-added, labor income, and employment. These estimates along with the \$2.3 billion output figure are reported in Table 5.

Table 5 Estimated Economic Characteristics of  
Nebraska Coal-Related Rail Transportation  
2013

<b>Characteristic</b>	<b>Coal-Hauling</b>	<b>Headquarters and Rail Yards</b>	<b>Nebraska Total</b>
Output (Millions of \$)	\$2,300.0	\$824.6	\$3,124.6
Value-Added (Millions of \$)	\$991.0	\$355.3	\$1,346.4
Labor Income (Millions of \$)	\$584.2	\$209.5	\$793.6
Employment	5,304	1,901	7,205

Source: Energy Information Administration for coal-hauling, other estimates from  
IMPLAN

As is well known, shipping is not the only rail industry activity in the state of Nebraska. Nebraska is home to three major rail yards and the headquarters for the Union Pacific Corporation. Table 5 also shows estimates of coal-related employment in these components of the rail industry. According to the American Railroad Association, coal hauling accounted for

21.6% of all U.S. rail revenue in 2012.<sup>3</sup> This percentage is applied to the rail industry employment in Douglas County, where the Union Pacific Railroad is headquartered and the three counties where large rail yards are located (Box Butte, Lancaster and Lincoln). Rail industry employment data for the four counties from 2011 were available from the IMPLAN model. County estimates were adjusted down modestly to ensure that total rail employment estimates for Nebraska, from coal-hauling, the three rail yards, and the Union Pacific Headquarters matched state totals for rail employment in 2011 of 12,000 jobs as reported by the U.S. Bureau of Labor Statistics. Year 2011 values were assumed to hold in 2013 as well, given limited growth of just a few hundred jobs in statewide rail industry employment from 2011 to 2013, according to the U.S. Bureau of Labor Statistics.<sup>4</sup> The estimated coal-related employment for headquarters functions and rail yards are shown in Table 5. The IMPLAN model was used to estimate value-added, labor income, and output levels consistent with that level of employment. Total coal-related employment in the Nebraska rail industry was estimated to be 7,205 in 2013, with output of \$3.1 billion.

These totals from Table 5 are the direct economic impact of coal-related rail transportation in Nebraska for 2013. This direct impact is listed in Table 6, which also shows the multiplier impact and the total economic impact for all four measures: output, value-added, labor income and employment. Multiplier impacts were estimated using IMPLAN and were added to the direct impact to yield the total economic impact. As seen in Table 6, the high wage jobs present in the rail industry lead to large multiplier impacts for labor income and employment. Output and value-added multiplier impacts are roughly 70% as large as the direct impact, which is typical of many industries in Nebraska. The labor income multiplier impact, however, is nearly as large as the direct economic impact and the employment multiplier impact is twice as large. Each high paying job in the rail industry supports two additional jobs in Nebraska. The total economic impact of the coal-related rail transportation industry in Nebraska was \$4.8 billion in 2013. The total value-added impact was \$2.3 billion. The total labor income impact is \$1.4 billion spread over nearly 22,600 workers, for an average labor income of \$63,200 per job, including both the rail industry jobs and the jobs throughout the economy in the multiplier impact.<sup>5</sup>

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<sup>3</sup> American Association of Railroads, 2013. *Railroads and Coal* (August).

<sup>4</sup> This U.S. Bureau of Labor Statistics source does not provide employment data at the county level.

<sup>5</sup> According to the American Association of Railroads (The Economic Impact of America's Freight Railroads), the average freight railroad employee earned wages of \$74,900 and fringe benefits of \$34,000, for total average compensation of \$108,900.



Table 6 Statewide Economic Impact from  
Nebraska Coal-Related Rail Transportation  
2013

Characteristic	Direct Impact	Multiplier Impact	Total Impact
Output (Millions of \$)	\$2,934.8	\$1,855.4	\$4,790.2
Value-Added (Millions of \$)	\$1,264.5	\$991.4	\$2,255.9
Labor Income (Millions of \$)	\$745.4	\$683.7	\$1,429.1
Employment	6,750	15,848	22,598

Source: Author's calculations using IMPLAN

Table 7 shows estimates of the state and local tax revenue impact in Nebraska from coal-related rail transportation in 2013. Revenue estimates are calculated using the same methodology adopted for Table 4. The key variable in making the estimates is the \$1.4 billion labor income impact. The total income tax revenue impact in 2013 was an estimated \$38.6 million while the total state and local sales tax revenue impact was \$36.0 million and the local property tax revenue impact was \$49.2 million. A row also is added for property taxes paid by railroads in Nebraska. Total state taxes of \$63.0 million were multiplied by 21.6%, for the share of rail activity in coal, yielding a \$13.6 million impact on property tax. The total tax revenue impact from all three major sources was \$137.4 million in Nebraska in 2013. .

Table 7 Fiscal Impact from Nebraska Coal-  
Related Rail Transportation 2013

Characteristic	Labor Income	Taxable		Revenue
		Amount	Tax Rate	Impact
Income Tax (Millions of \$)	\$1,429.1	\$1429.1	2.7%	\$38.6
Sales Tax (Millions of \$)	\$1,429.1	\$514.5	7.0%	\$36.0
Property Tax (Millions of \$)	\$1,429.1	\$2,458.1	2.0%	\$49.2
Direct Property Tax (Millions \$)				\$13.6
Total (Millions of \$)				\$137.4

Source: Author's calculations using IMPLAN

Table 8 shows the overall economic impact of coal in the state of Nebraska in 2013. The table sums the impact from the two sources of coal-fired electricity generating stations (Table 3) and coal-related rail transportation (Table 6). The overall economic impact of coal in Nebraska

was \$4.9 billion in terms of output (business receipts) during 2013. In terms of value-added, which is analogous to gross state product, the overall economic impact was \$2.3 billion. Such large economic impacts would naturally be reflected in the labor market. The overall impact of the coal industry on labor income in Nebraska, including wages, salaries, and benefits, was \$1.4 billion in 2013. This \$1.4 billion was spread over nearly 22,800 jobs.

Table 8 Statewide Economic Impact from the Coal Industry in 2013

Characteristic	Direct Impact	Multiplier Impact	Total Impact
Output (Millions of \$)	\$2,989.6	\$1,877.4	\$4,866.7
Value-Added (Millions of \$)	\$1,298.4	\$1,003.1	\$2,301.5
Labor Income (Millions of \$)	\$753.8	\$691.1	\$1,444.9
Employment	6,831	16,013	22,844

Source: Author's calculations using IMPLAN

Table 9 shows the overall fiscal impact, measured via tax revenue, of coal industry activity in the state of Nebraska in 2013. The table sums the impact from Tables 4 and 7. As always, the tax revenue impacts reflect state and local revenue from the three primary tax revenue sources: state income tax, state and local sales tax and local property tax. Local property taxes include direct payments by coal-related activity in the electric power generation and rail industries. The total state and local tax revenue impact was \$141.5 million in 2013

Table 9 Statewide Fiscal Impact from the Coal Industry in 2013

Characteristic	Labor Income Impact	Taxable Amount	Tax Rate	Revenue Impact
Income Tax Millions of \$)	\$1,444.9	\$1444.9	2.7%	\$39.0
Sales Tax (Millions of \$)	\$1,444.9	\$520.2	7.0%	\$36.4
Property Tax (Millions of \$)	\$1,444.9	\$2,485.2	2.0%	\$49.7
Direct Property Tax (Mill \$)				\$16.4
Total (Millions of \$)				\$141.5

Source: Author's calculations using IMPLAN

## **IV. Examples of Local Economic Impact**

The economic and fiscal impact of the Nebraska coal industry is felt throughout the state of Nebraska. First, rail and coal-fired electric power generation jobs are found in many counties of the state. Second, jobs due to the multiplier impact are found in every county. In terms of fiscal impacts, railroads pay local property taxes throughout Nebraska, sometimes accounting for a large share of the property tax base in smaller rural counties. At the same time, publicly-owned electric utilities make payments in lieu of taxes.

While the impacts are widespread geographically, it is also true that impacts are concentrated in select communities; in particular, communities which have a coal-fired electric generation station, or a rail yard or a rail company headquarters facility. The impact of the coal industry can be especially large in these communities.

This section of the report demonstrates the size of this local impact using the example of activities in North Platte, Nebraska. In particular, the North Platte Micropolitan Statistical Area, which includes Lincoln, Logan and McPherson counties, is home to two major facilities involved in the coal industry. These facilities are Gerald Gentleman Station, a coal-fired electric power station operated by the Nebraska Public Power District and the Bailey Yard of Union Pacific Railroad. The latter facility services trains traveling across the country including many coal trains and coal cars.

### ***A. Gerald Gentleman Station***

Table 10 shows an estimate of the economic impact of the Gerald Gentleman Station on the North Platte Micropolitan Statistical Area. The direct impact includes the employment and wages and benefits among the workforce at the station. As was reported previously in Table 1, there were 219 positions at Gerald Gentleman Station on average during 2013. Customers located throughout the state of Nebraska, as well as out of state, support this electricity generation and employment. Therefore from a local perspective all of this employment represents a direct economic impact on the local economy. In other words, the direct employment impact of Gerald Gentleman Station on the North Platte Micropolitan Statistical Area is 219 jobs. The direct impact is also shown in terms of output, value-added and labor income. In Table 10, the multiplier impact reflects the additional business receipts, value-added, employment and wage and salary earnings within the Micropolitan Statistical Area, but excluding other parts of the state. Local economic impacts are somewhat smaller than statewide impacts. For example, consider a worker at the power station who resides outside of the North Platte Micropolitan Statistical Area. That worker may contribute little to the multiplier impact of Gerald Gentleman Station on the North Platte.

**Table 10 North Platte Micropolitan Statistical Area Economic  
Impact from the Gerald Gentleman Station 2013**

<b>Characteristic</b>	<b>Direct Impact</b>	<b>Multiplier Impact</b>	<b>Total Impact</b>
Output (Millions of \$)	\$151.9	\$31.9	\$183.8
Value-Added (Millions of \$)	\$96.7	\$17.5	\$114.2
Labor Income (Millions of \$)	\$23.3	\$10.9	\$34.2
Employment	219	273	492

Source: Author's calculations using IMPLAN

The sum of the direct economic impact and the multiplier impact is the total economic impact. The total economic impact of Gerald Gentleman Station was estimated as \$183.8 billion in output in 2013. The economic impact in terms of value-added was \$114.2 million during the year. The value-added impact includes \$34.2 million in labor wages and salaries earned in a total of 492 jobs.

These local economic impacts also lead to local fiscal impacts in the North Platte Micropolitan Statistical Area, as seen in Table 11. Fiscal impacts are reflected in local property tax and local option sales tax revenue, as well as direct property tax payments or payments in lieu of taxes by the utility. As described earlier in the report, 36% of income is spent on taxable sales while other income supports the purchase or rental of taxable property. Applying local sales and property tax rates yields an estimate that \$5.3 million in sales and property taxes are generated in the North Platte Micropolitan Statistical Area, as reported in Table 11.

**Table 11 Local Fiscal Impact from Gerald Gentleman Station  
2013**

<b>Characteristic</b>	<b>Labor Income</b>	<b>Taxable Amount</b>	<b>Tax Rate</b>	<b>Revenue Impact</b>
Sales Tax (Millions of \$)	\$34.2	\$12.3	1.5%	\$0.2
Property Tax (Millions of \$)	\$34.2	\$58.8	1.8%	\$1.1
Direct Property Tax (Mill \$)				\$4.0
Total (Millions of \$)				\$5.3

Source: Author's calculations using IMPLAN

### **B. The Bailey Yard**

Coal-related activity at the Bailey Yard also had a significant economic impact on the North Platte Micropolitan Statistical Area economy in 2013. Recall that only a portion of activity at the Bailey Yard services coal cars and trains. We estimate that 21.6% of activity is coal related based on coal's share of U.S. rail industry revenue in 2012. This ratio is expected to hold for employment at the Bailey Yard as well as wages and estimated output.

Table 12 reports the estimated direct economic impact of coal-related activity in the Bailey Yard in 2013. Local multiplier impacts also are reported in Table 12, along with total economic impacts. The total economic impact was estimated as \$185.6 billion in output in 2013. The economic impact in terms of value-added was \$82.8 million during the year. The value-added impact included \$49.7 million in labor wages and salaries earned in a total of 753 jobs.

Table 12 North Platte Micropolitan Statistical Area Economic Impact from the Bailey Yard 2013

<b>Characteristic</b>	<b>Direct Impact</b>	<b>Multiplier Impact</b>	<b>Total Impact</b>
Output (Millions of \$)	\$137.7	\$47.9	\$185.6
Value-Added (Millions of \$)	\$57.5	\$25.3	\$82.8
Labor Income (Millions of \$)	\$32.6	\$17.1	\$49.7
Employment	325	428	753

Source: Author's calculations using IMPLAN

Local fiscal impacts from coal-related activity in the Bailey Yard are reported in Table 13. Applying local sales and property tax rates yields an estimate of \$1.8 million in sales and property taxes are generated in the North Platte Micropolitan Statistical Area,

Table 13 Local Fiscal Impact from The Bailey Yard 2013

<b>Characteristic</b>	<b>Labor Income Impact</b>	<b>Taxable Amount</b>	<b>Tax Rate</b>	<b>Revenue Impact</b>
Sales Tax (Millions of \$)	\$49.7	\$17.9	1.5%	\$0.3
Property Tax (Millions of \$)	\$49.7	\$85.6	1.8%	\$1.5
Direct Property Tax (Mill \$)				\$0.5
Total (Millions of \$)				\$1.8

Source: Author's calculations using IMPLAN

## **V. Conclusion**

Coal is an important commodity in Nebraska. It is used to produce electricity for consumption in Nebraska and for export to purchasers located out of state. Coal transportation also is a vibrant part of our economy. This analysis examined the direct effects of coal on the electricity generation and transportation sectors of the Nebraska economy. It also measured the multiplied impacts as initial spending rippled through the Nebraska economy. All told, coal is responsible for generating almost \$4.9 billion in output annually for the state, including \$2.3 billion in value-added. This is a significant contribution to annual gross state product in Nebraska, which is approximately \$100 billion. It creates almost 23,000 jobs and about \$1.4 billion in labor income. In addition, activity in the coal-fired electricity generation and coal transportation industries generate about \$142 million in taxes on income, sales and property.

## **Appendix 1:**

### **About the Bureau of Business Research and Author**

#### **A. The Bureau of Business Research**

The Bureau of Business Research is a leading source for analysis and information on the Nebraska and Great Plains economy. The Bureau conducts both contract and sponsored research on the economy of states and communities including: 1) economic and fiscal impact analysis; 2) models of the structure and comparative advantage of the current economy; 3) economic, fiscal, and demographic outlooks, and 4) assessments of how economic policy affects industry, labor markets, infrastructure, and the standard of living. The Bureau also competes for research funding from federal government agencies and private foundations from around the nation and contributes to the academic mission of the University of Nebraska-Lincoln through scholarly publication and the education of students. The Bureau website address is [www.bbr.unl.edu](http://www.bbr.unl.edu).

#### **Dr. Eric Thompson – Principal Investigator**

Dr. Eric Thompson is an Associate Professor in the Department of Economics at the University of Nebraska-Lincoln. He received his Ph.D. in Agricultural Economics from the University of Wisconsin-Madison with an emphasis in community economic development. He has served as Director of the Bureau of Business in the College of Business Administration at the University of Nebraska-Lincoln since August 2004.

Under the auspices of the Bureau of Business Research, Dr. Thompson spearheads a quarterly publication, *Business in Nebraska*. The Bureau partners with the Nebraska Business Forecast Council to dedicate two issues of *Business in Nebraska* to forecasting the Nebraska business climate, wages and employment outlook. The remaining two issues cover diverse and timely topics facing the state of Nebraska. In 2011, he began publishing a monthly Leading Economic Indicator report. These publications are free and available via email and at the Bureau website, [bbr.unl.edu](http://bbr.unl.edu).

Professor Thompson has published 10 peer reviewed articles in journals such as *Journal of Regional Science*, *American Journal of Agricultural Economics*, and *Regional Science and Urban Economics*. Thompson has served as President of both the Nebraska Economics and Business Association (NEBA) and the Association for University Business and Economic

Research (AUBER). His book, co-authored with Professor William Walstad, *Entrepreneurship in Nebraska: Conditions, Attitudes, and Actions*, was published in 2008.

Throughout his career Thompson has received over one hundred national and local grants from organizations such as the U.S. Department of Transportation, U.S. Chamber of Commerce, National Association of State Courts, Nebraska State Historical Society, Platte Institute for Economic Research, Nebraska Department of Roads, and Lincoln Chamber of Commerce.

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## Appendix 2

### Rail Hauling Information

Year	Qtr	Origin State	Destination State	Consumer Type	Coal Volume (short tons)	Rail \$/ton		\$1000 Value	Distance	Percent Nebraska	NE Value \$1,000
2012	1	Colorado	Alabama	Electric Power Sector	82,497	27.67		\$2,283	1150	0.39	\$893
2012	2	Colorado	Alabama	Electric Power Sector	275,180	27.67		\$7,614	1150	0.39	\$2,979
2012	3	Colorado	Alabama	Electric Power Sector	455,974	27.67		\$12,617	1150	0.39	\$4,937
2012	3	Colorado	Alabama	Industrial Plants Excluding Coke	15,905	27.67		\$440	1150	0.39	\$172
2012	4	Colorado	Alabama	Electric Power Sector	301,220	27.67		\$8,335	1150	0.39	\$3,261
2012	4	Colorado	Alabama	Industrial Plants Excluding Coke	24,671	27.67		\$683	1150	0.39	\$267
2012	1	Colorado	Illinois	Electric Power Sector	497,166	18.61	E	\$9,253	680	0.66	\$6,123
2012	2	Colorado	Illinois	Electric Power Sector	132,816	18.61	E	\$2,472	680	0.66	\$1,636
2012	3	Colorado	Illinois	Electric Power Sector	226,298	18.61	E	\$4,212	680	0.66	\$2,787
2012	4	Colorado	Illinois	Electric Power Sector	144,311	18.61	E	\$2,686	680	0.66	\$1,777
2012	1	Colorado	Indiana	Industrial Plants Excluding Coke	23,966	20.68		\$496	1050	0.43	\$212
2012	2	Colorado	Indiana	Industrial Plants Excluding Coke	35,400	20.68		\$732	1050	0.43	\$314
2012	3	Colorado	Indiana	Industrial Plants Excluding Coke	75,863	20.68		\$1,569	1050	0.43	\$672
2012	4	Colorado	Indiana	Industrial Plants Excluding Coke	66,692	20.68		\$1,379	1050	0.43	\$591
2012	1	Colorado	Iowa	Industrial Plants Excluding Coke	7,378	20.18	E	\$149	670	0.67	\$100
2012	2	Colorado	Iowa	Industrial Plants Excluding Coke	9,897	20.18	E	\$200	670	0.67	\$134
2012	3	Colorado	Iowa	Industrial Plants Excluding Coke	7,878	20.18	E	\$159	670	0.67	\$107
2012	4	Colorado	Iowa	Industrial Plants Excluding Coke	7,469	20.18	E	\$151	670	0.67	\$101
2012	1	Colorado	Kentucky	Electric Power Sector	373,683	23.83		\$8,905	1120	0.40	\$3,578
2012	2	Colorado	Kentucky	Electric Power Sector	546,756	23.83		\$13,029	1120	0.40	\$5,235
2012	3	Colorado	Kentucky	Electric Power Sector	418,090	23.83		\$9,963	1120	0.40	\$4,003
2012	4	Colorado	Kentucky	Electric Power Sector	469,524	23.83		\$11,189	1120	0.40	\$4,495
2012	1	Colorado	Michigan	Electric Power Sector	8,269	43.49		\$360	1125	0.40	\$144

2012	1	Colorado	Michigan	Industrial Plants Excluding Coke	41,439	43.49		\$1,802	1125	0.40	\$721
2012	2	Colorado	Michigan	Electric Power Sector	29,235	43.49		\$1,271	1125	0.40	\$509
2012	2	Colorado	Michigan	Industrial Plants Excluding Coke	17,109	43.49		\$744	1125	0.40	\$298
2012	3	Colorado	Michigan	Electric Power Sector	52,926	43.49		\$2,302	1125	0.40	\$921
2012	3	Colorado	Michigan	Industrial Plants Excluding Coke	34,339	43.49		\$1,493	1125	0.40	\$597
2012	4	Colorado	Michigan	Electric Power Sector	32,188	43.49		\$1,400	1125	0.40	\$560
2012	4	Colorado	Michigan	Industrial Plants Excluding Coke	46,932	43.49		\$2,041	1125	0.40	\$816
2012	1	Colorado	Missouri	Industrial Plants Excluding Coke	43,385	20.18	E	\$876	720	0.63	\$547
2012	2	Colorado	Missouri	Industrial Plants Excluding Coke	39,873	20.18	E	\$805	720	0.63	\$503
2012	3	Colorado	Missouri	Industrial Plants Excluding Coke	48,370	20.18	E	\$976	720	0.63	\$610
2012	4	Colorado	Missouri	Industrial Plants Excluding Coke	61,886	20.18	E	\$1,249	720	0.63	\$781
2012	1	Colorado	Nebraska	Industrial Plants Excluding Coke	20,392	15.14	E	\$309	370	0.85	\$262
2012	2	Colorado	Nebraska	Industrial Plants Excluding Coke	41,100	15.14	E	\$622	370	0.85	\$529
2012	3	Colorado	Nebraska	Industrial Plants Excluding Coke	41,677	15.14	E	\$631	370	0.85	\$536
2012	4	Colorado	Nebraska	Industrial Plants Excluding Coke	20,723	15.14	E	\$314	370	0.85	\$267
2012	1	Colorado	Oklahoma	Industrial Plants Excluding Coke	2,649	20.18	E	\$53	515	0.87	\$45
2012	2	Colorado	Oklahoma	Electric Power Sector	110	20.18	E	\$2	515	0.87	\$2
2012	1	Colorado	Tennessee	Electric Power Sector	310,871	25.23		\$7,843	1105	0.41	\$3,194
2012	2	Colorado	Tennessee	Electric Power Sector	716,783	25.23		\$18,084	1105	0.41	\$7,365
2012	3	Colorado	Tennessee	Electric Power Sector	874,426	25.23		\$22,062	1105	0.41	\$8,984
2012	4	Colorado	Tennessee	Electric Power Sector	591,843	25.23		\$14,932	1105	0.41	\$6,081
2012	1	Colorado	Texas	Industrial Plants Excluding Coke	123,376	20.18	E	\$2,490	640	0.70	\$1,751
2012	2	Colorado	Texas	Industrial Plants Excluding Coke	108,420	20.18	E	\$2,188	640	0.70	\$1,539
2012	3	Colorado	Texas	Industrial Plants Excluding Coke	164,684	20.18	E	\$3,324	640	0.70	\$2,337
2012	4	Colorado	Texas	Industrial Plants Excluding Coke	236,159	20.18	E	\$4,767	640	0.70	\$3,352
2012	1	Colorado	Wisconsin	Electric Power Sector	20,818	60.02		\$1,249	910	0.49	\$618
2012	1	Colorado	Wisconsin	Industrial Plants Excluding Coke	24,112	60.02		\$1,447	910	0.49	\$716
2012	2	Colorado	Wisconsin	Industrial Plants Excluding Coke	63,945	60.02		\$3,838	910	0.49	\$1,898
2012	3	Colorado	Wisconsin	Industrial Plants Excluding Coke	60,273	60.02		\$3,618	910	0.49	\$1,789

2012	4	Colorado	Wisconsin	Electric Power Sector	85,244	60.02		\$5,116	910	0.49	\$2,530
2012	4	Colorado	Wisconsin	Industrial Plants Excluding Coke	45,075	60.02		\$2,705	910	0.49	\$1,338
2012	1	Montana	Ohio	Electric Power Sector	164,631	33.48		\$5,512	1425	0.32	\$1,741
2012	2	Montana	Ohio	Electric Power Sector	29,086	33.48		\$974	1425	0.32	\$308
2012	3	Montana	Ohio	Electric Power Sector	27,192	33.48		\$910	1425	0.32	\$287
2012	1	Utah	Kentucky	Electric Power Sector	31,188	33.48	E	\$1,044	1470	0.31	\$320
2012	1	Utah	Tennessee	Electric Power Sector	23,047	25.24		\$582	1430	0.31	\$183
2012	2	Utah	Tennessee	Electric Power Sector	24,453	25.24		\$617	1430	0.31	\$194
2012	3	Utah	Tennessee	Electric Power Sector	502	25.24		\$13	1430	0.31	\$4
2012	4	Utah	Tennessee	Electric Power Sector	5,533	25.24		\$140	1430	0.31	\$44
2012	1	Utah	Wisconsin	Industrial Plants Excluding Coke	10,460	22.61	E	\$236	1200	0.38	\$89
2012	2	Utah	Wisconsin	Industrial Plants Excluding Coke	8,058	22.61	E	\$182	1200	0.38	\$68
2012	3	Utah	Wisconsin	Industrial Plants Excluding Coke	8,406	22.61	E	\$190	1200	0.38	\$71
2012	4	Utah	Wisconsin	Industrial Plants Excluding Coke	87	22.61	E	\$2	1200	0.38	\$1
2012	1	Wyoming	Alabama	Electric Power Sector	2,851,646	20.4		\$58,174	1350	0.33	\$19,391
2012	2	Wyoming	Alabama	Electric Power Sector	2,599,959	20.4		\$53,039	1350	0.33	\$17,680
2012	3	Wyoming	Alabama	Electric Power Sector	3,104,877	20.4		\$63,339	1350	0.33	\$21,113
2012	4	Wyoming	Alabama	Electric Power Sector	3,196,097	20.4		\$65,200	1350	0.33	\$21,733
2012	1	Wyoming	Georgia	Electric Power Sector	2,870,570	30.09		\$86,375	1510	0.30	\$25,741
2012	2	Wyoming	Georgia	Electric Power Sector	2,758,179	30.09		\$82,994	1510	0.30	\$24,733
2012	3	Wyoming	Georgia	Electric Power Sector	3,150,891	30.09		\$94,810	1510	0.30	\$28,255
2012	4	Wyoming	Georgia	Electric Power Sector	3,426,112	30.09		\$103,092	1510	0.30	\$30,723
2012	1	Wyoming	Illinois	Electric Power Sector	13,946,025	15.76		\$219,789	980	0.46	\$100,924
2012	1	Wyoming	Illinois	Industrial Plants Excluding Coke	113,542	15.76		\$1,789	980	0.46	\$822
2012	2	Wyoming	Illinois	Electric Power Sector	11,613,709	15.76		\$183,032	980	0.46	\$84,045
2012	2	Wyoming	Illinois	Industrial Plants Excluding Coke	86,559	15.76		\$1,364	980	0.46	\$626
2012	3	Wyoming	Illinois	Electric Power Sector	14,224,544	15.76		\$224,179	980	0.46	\$102,939
2012	3	Wyoming	Illinois	Industrial Plants Excluding Coke	141,489	15.76		\$2,230	980	0.46	\$1,024
2012	4	Wyoming	Illinois	Electric Power Sector	12,717,527	15.76		\$200,428	980	0.46	\$92,033

2012	4	Wyoming	Illinois	Industrial Plants Excluding Coke	175,020	15.76		\$2,758	980	0.46	\$1,267
2012	1	Wyoming	Indiana	Electric Power Sector	1,741,091	20.29		\$35,327	1130	0.40	\$14,068
2012	2	Wyoming	Indiana	Electric Power Sector	1,206,025	20.29		\$24,470	1130	0.40	\$9,745
2012	3	Wyoming	Indiana	Electric Power Sector	1,657,459	20.29		\$33,630	1130	0.40	\$13,392
2012	4	Wyoming	Indiana	Electric Power Sector	1,433,682	20.29		\$29,089	1130	0.40	\$11,584
2012	1	Wyoming	Iowa	Electric Power Sector	5,819,053	10.12		\$58,889	725	0.62	\$36,552
2012	1	Wyoming	Iowa	Industrial Plants Excluding Coke	636,301	10.12		\$6,439	725	0.62	\$3,997
2012	2	Wyoming	Iowa	Electric Power Sector	4,893,858	10.12		\$49,526	725	0.62	\$30,740
2012	2	Wyoming	Iowa	Industrial Plants Excluding Coke	558,490	10.12		\$5,652	725	0.62	\$3,508
2012	3	Wyoming	Iowa	Electric Power Sector	6,135,066	10.12		\$62,087	725	0.62	\$38,537
2012	3	Wyoming	Iowa	Industrial Plants Excluding Coke	645,344	10.12		\$6,531	725	0.62	\$4,054
2012	4	Wyoming	Iowa	Electric Power Sector	5,416,476	10.12		\$54,815	725	0.62	\$34,023
2012	4	Wyoming	Iowa	Industrial Plants Excluding Coke	521,508	10.12		\$5,278	725	0.62	\$3,276
2012	1	Wyoming	Kansas	Electric Power Sector	4,884,359	14.22		\$69,456	580	0.78	\$53,888
2012	2	Wyoming	Kansas	Electric Power Sector	3,938,604	14.22		\$56,007	580	0.78	\$43,454
2012	3	Wyoming	Kansas	Electric Power Sector	4,880,129	14.22		\$69,395	580	0.78	\$53,841
2012	4	Wyoming	Kansas	Electric Power Sector	3,971,792	14.22		\$56,479	580	0.78	\$43,820
2012	1	Wyoming	Kentucky	Electric Power Sector	418,430	17.91		\$7,494	1270	0.35	\$2,655
2012	2	Wyoming	Kentucky	Electric Power Sector	405,807	17.91		\$7,268	1270	0.35	\$2,575
2012	3	Wyoming	Kentucky	Electric Power Sector	689,867	17.91		\$12,356	1270	0.35	\$4,378
2012	4	Wyoming	Kentucky	Electric Power Sector	744,878	17.91		\$13,341	1270	0.35	\$4,727
2012	1	Wyoming	Maryland	Electric Power Sector	44,465	34.01	E	\$1,512	1650	0.27	\$412
2012	2	Wyoming	Maryland	Electric Power Sector	60,252	34.01	E	\$2,049	1650	0.27	\$559
2012	3	Wyoming	Maryland	Electric Power Sector	195,467	34.01	E	\$6,648	1650	0.27	\$1,813
2012	4	Wyoming	Maryland	Electric Power Sector	59,876	34.01	E	\$2,037	1650	0.27	\$555
2012	1	Wyoming	Michigan	Electric Power Sector	4,546,826	18.99		\$86,344	1160	0.39	\$33,496
2012	2	Wyoming	Michigan	Electric Power Sector	3,692,277	18.99		\$70,116	1160	0.39	\$27,200
2012	3	Wyoming	Michigan	Electric Power Sector	4,697,023	18.99		\$89,196	1160	0.39	\$34,602
2012	3	Wyoming	Michigan	Industrial Plants Excluding Coke	17,417	18.99		\$331	1160	0.39	\$128

2012	4	Wyoming	Michigan	Electric Power Sector	4,076,011	18.99		\$77,403	1160	0.39	\$30,027
2012	4	Wyoming	Michigan	Industrial Plants Excluding Coke	9,352	18.99		\$178	1160	0.39	\$69
2012	1	Wyoming	Minnesota	Electric Power Sector	2,029,493	20.55		\$41,706	680	0.66	\$27,600
2012	1	Wyoming	Minnesota	Industrial Plants Excluding Coke	16,565	20.55		\$340	680	0.66	\$225
2012	2	Wyoming	Minnesota	Electric Power Sector	1,474,852	20.55		\$30,308	680	0.66	\$20,057
2012	2	Wyoming	Minnesota	Industrial Plants Excluding Coke	74,387	20.55		\$1,529	680	0.66	\$1,012
2012	3	Wyoming	Minnesota	Electric Power Sector	2,558,418	20.55		\$52,575	680	0.66	\$34,793
2012	3	Wyoming	Minnesota	Industrial Plants Excluding Coke	199,520	20.55		\$4,100	680	0.66	\$2,713
2012	4	Wyoming	Minnesota	Electric Power Sector	2,570,105	20.55		\$52,816	680	0.66	\$34,952
2012	4	Wyoming	Minnesota	Industrial Plants Excluding Coke	142,621	20.55		\$2,931	680	0.66	\$1,940
2012	1	Wyoming	Missouri	Electric Power Sector	11,719,471	13.99		\$163,955	850	0.53	\$86,800
2012	2	Wyoming	Missouri	Electric Power Sector	9,501,204	13.99		\$132,922	850	0.53	\$70,370
2012	3	Wyoming	Missouri	Electric Power Sector	11,792,811	13.99		\$164,981	850	0.53	\$87,343
2012	4	Wyoming	Missouri	Electric Power Sector	10,000,814	13.99		\$139,911	850	0.53	\$74,071
2012	1	Wyoming	Nebraska	Electric Power Sector	3,798,119	10.87		\$41,286	430	0.85	\$35,093
2012	1	Wyoming	Nebraska	Industrial Plants Excluding Coke	313,002	10.87		\$3,402	430	0.85	\$2,892
2012	2	Wyoming	Nebraska	Electric Power Sector	3,025,703	10.87		\$32,889	430	0.85	\$27,956
2012	2	Wyoming	Nebraska	Industrial Plants Excluding Coke	226,919	10.87		\$2,467	430	0.85	\$2,097
2012	3	Wyoming	Nebraska	Electric Power Sector	4,187,215	10.87		\$45,515	430	0.85	\$38,688
2012	3	Wyoming	Nebraska	Industrial Plants Excluding Coke	195,395	10.87		\$2,124	430	0.85	\$1,805
2012	4	Wyoming	Nebraska	Electric Power Sector	3,601,972	10.87		\$39,153	430	0.85	\$33,280
2012	4	Wyoming	Nebraska	Industrial Plants Excluding Coke	227,485	10.87		\$2,473	430	0.85	\$2,102
2012	1	Wyoming	New York	Electric Power Sector	351,894	34.01	E	\$11,969	1600	0.28	\$3,366
2012	2	Wyoming	New York	Electric Power Sector	24,346	34.01	E	\$828	1600	0.28	\$233
2012	3	Wyoming	New York	Electric Power Sector	303,718	34.01	E	\$10,330	1600	0.28	\$2,905
2012	4	Wyoming	New York	Electric Power Sector	167,431	34.01	E	\$5,695	1600	0.28	\$1,602
2012	1	Wyoming	Ohio	Electric Power Sector	372,061	30.92		\$11,504	1300	0.35	\$3,982
2012	2	Wyoming	Ohio	Electric Power Sector	385,444	30.92		\$11,918	1300	0.35	\$4,125
2012	3	Wyoming	Ohio	Electric Power Sector	277,681	30.92		\$8,586	1300	0.35	\$2,972

2012	4	Wyoming	Ohio	Electric Power Sector	102,193	30.92		\$3,160	1300	0.35	\$1,094
2012	1	Wyoming	Oklahoma	Electric Power Sector	5,405,645	17.83		\$96,383	765	0.59	\$56,696
2012	1	Wyoming	Oklahoma	Industrial Plants Excluding Coke	113,217	17.83		\$2,019	765	0.59	\$1,187
2012	2	Wyoming	Oklahoma	Electric Power Sector	4,022,872	17.83		\$71,728	765	0.59	\$42,193
2012	2	Wyoming	Oklahoma	Industrial Plants Excluding Coke	137,628	17.83		\$2,454	765	0.59	\$1,443
2012	3	Wyoming	Oklahoma	Electric Power Sector	4,529,327	17.83		\$80,758	765	0.59	\$47,505
2012	3	Wyoming	Oklahoma	Industrial Plants Excluding Coke	135,949	17.83		\$2,424	765	0.59	\$1,426
2012	4	Wyoming	Oklahoma	Electric Power Sector	4,668,073	17.83		\$83,232	765	0.59	\$48,960
2012	4	Wyoming	Oklahoma	Industrial Plants Excluding Coke	142,370	17.83		\$2,538	765	0.59	\$1,493
2012	1	Wyoming	Tennessee	Electric Power Sector	1,762,727	22.52		\$39,697	1250	0.36	\$14,291
2012	2	Wyoming	Tennessee	Electric Power Sector	2,478,473	22.52		\$55,815	1250	0.36	\$20,093
2012	3	Wyoming	Tennessee	Electric Power Sector	2,469,607	22.52		\$55,616	1250	0.36	\$20,022
2012	4	Wyoming	Tennessee	Electric Power Sector	2,142,026	22.52		\$48,238	1250	0.36	\$17,366
2012	1	Wyoming	West Virginia	Electric Power Sector	25,716	22.52	E	\$579	1440	0.31	\$181
2012	2	Wyoming	West Virginia	Electric Power Sector	21,045	22.52	E	\$474	1440	0.31	\$148
2012	1	Wyoming	Wisconsin	Electric Power Sector	4,468,594	19.99		\$89,327	910	0.49	\$44,173
2012	1	Wyoming	Wisconsin	Industrial Plants Excluding Coke	88,363	19.99		\$1,766	910	0.49	\$873
2012	2	Wyoming	Wisconsin	Electric Power Sector	3,191,734	19.99		\$63,803	910	0.49	\$31,551
2012	2	Wyoming	Wisconsin	Industrial Plants Excluding Coke	78,444	19.99		\$1,568	910	0.49	\$775
2012	3	Wyoming	Wisconsin	Electric Power Sector	4,924,811	19.99		\$98,447	910	0.49	\$48,683
2012	3	Wyoming	Wisconsin	Industrial Plants Excluding Coke	80,059	19.99		\$1,600	910	0.49	\$791
2012	4	Wyoming	Wisconsin	Electric Power Sector	4,990,226	19.99		\$99,755	910	0.49	\$49,329
2012	4	Wyoming	Wisconsin	Industrial Plants Excluding Coke	87,053	19.99		\$1,740	910	0.49	\$861
Total					269,118,637			\$4,583,103			\$2,270,658